Establishing & Sustaining Healthy Work Environments:

Appropriate Staffing and Budgeting of Staff Resources

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“Skill and Passion to Link Financial and Clinical Data for Organization Improvement”
Session Objectives

• Understanding how appropriate staffing is part of a healthy work environment

• Understand definition of productivity measures, e.g. hours of care per patient day

• Identify how staffing patterns and staff ratios determine hours of care

• Discuss day to day decisions that impact nurse staffing
Appropriate Staffing as Part of a Healthy Work Environment

• In 2018-2019 Legislative Session for New Jersey bills A1470 and S989 were introduced to establish minimum Professional Registered Nurse Staffing Standards.
  – These standards are proposed for hospitals and ambulatory surgery facilities.
• Organization of Nurse Leaders of NJ (ONL/NJ), the NJSNA, and the NJ Council of Magnet Organizations (NJCOMO), and the NJ Nursing Leadership Council (NJ CLC) do not support mandated ratios.
  • They are addressing the bigger issue for the best healthy workforce environment modeled after the American Association of Critical care Nurses (AACN) Synergy Model of Patient Care: Healthy Work Environments.
  • They support hospital based staffing committees of nursing leadership and care providers to discuss resource allocation based on evidenced based practices and competencies for optimal patient outcomes.
  – “Now is the time to stop the regulation of hospital nurse staffing dead in its track.” (Beurhaus, 2010)
  • Focus on creating innovative staffing patterns and develop new roles for nurses
AACN Synergy Model of Patient Care (AACN, 2016)
Appropriate Staffing (AACN, 2005)

**Staffing must ensure the effective match between patient needs and nurse competencies**

- Inappropriate staffing is harmful to patient safety and well-being of nurses.
- Improved outcomes research relates specialty certification and clinical nursing expertise with improved patient outcomes.
- Inadequate staffing leads to nurse dissatisfaction, burnout, and turnover.
  - Nurse turnover jeopardizes quality of care, increases costs and decrease organization profitability.
- Staffing is a complex process matching skills and competencies of nurse with needs of patients.
  - Relying on staffing ratios alone ignores variance in patient needs, acuity, and staff competencies.
- Innovations in staffing models need to be devised and tested.
Appropriate Staffing (AACN, 2005) (cont’d)

**Critical elements:**

- Nurses participate in all organizational phases of staffing process from education, planning, and matching nurses’ competencies with patient needs.
- Formal processes exist to evaluate staffing decisions on patient and system outcomes.
- Staffing and outcomes data are used to develop more effective staffing models.
- The organization utilizes support services at all levels of activity to ensure nurses can optimally focus on patient care priorities.
- Shared governance models have developed staffing committees or staffing councils to accomplish the following:
  - Educate staff about staffing and budgeting models
  - Obtain staff input into unit staffing plans
A Culture of Financial Excellence

• A culture of safety, quality and customer satisfaction is *not* in conflict with a culture of financial excellence.

• Financial excellence drives us to work more effectively with less hassle and work in ways that save time.

• The current and future health care systems are driving for increased economic accountability.

• “Value” is the key word in today’s health care system spoken by payers and customers.

\[
\text{Value} = \frac{\text{Quality}}{\text{Cost}}
\]
The income statement will indicate whether the “bottom line” was a profit or a loss:

- Profit = Net Revenue – Net Expenses  
  (Revenues > Expenses)

- (Loss) = Net Expenses – Net Revenue  
  (Expenses > Revenues)
Income Statement: 1/01/18-12/31/18

Example

Gross Patient Service Revenue
- Routine patient services $53,000,000
- Deductions from Revenue: $(1,000,000)
Net Patient Service Revenue $52,000,000

Total Operating Expenses
- Salaries & benefits $45,000,000
- Other $6,000,000
Total Operating Expenses $51,000,000

Net income or (Loss) from Patient Services: $1,000,000

Operating Margin for Patient Services:

Net income from Patient Services $1,000,000 = 1.9%
Net revenue from Patient Services $52,000,000
Operating Margin

The operating margin is the percentage of profit that the organization makes from the operation of its business.

- Operating Margin for Hospitals = \[
\frac{\text{Net Income from Operations}}{\text{Net Revenue from Patient Care}}
\]

- What’s your organization’s projected operating margin for fiscal year 2018?
Preparation of the Patient Care Unit’s Operating Budget
The Operating Budget

• The operating budget is a plan and control for day-to-day operating revenue and expense over a one year period.

• The operating budget contains 3 parts:
  – **Statistical Budget**
    • Assumptions about expected volumes and the scope of activities upon which revenue and expenses are based.
  – **Revenue Budget**
    • Converts the expected unit of service into predicted revenue dollars.
  – **Expense Budget**
    • Converts the expected work into predicted personnel and supply/service expense dollars.

• Annual budgets then are divided into monthly budgets in order to have an adequate basis to control costs during the year.
Communication and Data are Key

“The Definitions”

Caregiver
Unit of Service
Hours Per Patient Day
Hours Per ED Visit
Hours Per OR Case

Why is This Important?
Key Terms — Hours of Care Per Patient Day (HPPD)

HPPD – Hours Per Patient Day

- Hours of care measured are selected by the organization. For example:
  - Nursing Care Hours Per Patient Day (NCHPPD)
    - This would include all nurses and techs providing direct patient care.
  - Worked Hours Per Patient Day (WHPPD)
    - This would include all direct care givers plus clerical and administrative staff.
  - Paid Hours Per Patient Day (PHPPD)
    - This would include all worked hours for direct care givers and others as well as their benefit hours.
HPPD – Hours Per Patient Day (cont’d)

- Hours of care are calculated by dividing labor hours for care by patient days.
  - Both hours and patient days need to be for the same time period:
    - Annual hours divided by annual patient days
    - Pay period (two weeks) hours divided by pay period (two weeks) patient days
    - Daily hours divided by daily patient days
Key Terms – Full Time Equivalent

- FTE – Full Time Equivalent (1.0 FTE)
  - The hours of a FTE are based on the organization’s pay structure:
    - A Full Time Equivalent = 1.0 FTE
      - The 1.0 FTE could be 40 hours per week (52 weeks X 40 hours = 2,080 annual hours)
      - OR
      - The 1.0 FTE could be 37.5 hours per week (52 weeks X 37.5 hours = 1,950 annual hours)

What’s an FTE at YOUR organization?
FTE – Full Time Equivalent (1.0 FTE) (cont’d)

- 1.0 FTE could be made up of one full time employee who works 40 hrs. per week or two or more part-timers to total 40 hrs. per week.

- Is a 12 hour shift employee working three (3) 12 hour shifts considered “1.0 FTE”?
  - Not usually
  - *Why not?*
    - 36 hours per week divided by 40 hours = .9 FTE
      (If the 1.0 FTE work week is 40 hours.)
    - 36 hours per week divided by 37.5 hours = .96 FTE
      (If the 1.0 FTE work week is 37.5 hours.)
Key Terms - Unit of Service

- UOS – Unit of Service
  - Units of services are determined by the patient activity:
    - Patient days for bedded units
    - Patient visits for outpatient activity of visit activity, e.g. ED visits, ambulatory care visits
    - Patient minutes or hours for areas where hours for cases are measured, e.g. OR hours
    - Patient births or birth “equivalents”, e.g. for labor & delivery birthing patients

- Therefore, your *unit of service* can be substituted for patient days if you are determining care hours for your unit of services.
Key Terms - Unit of Service

- Hours of care are calculated by dividing labor hours for care by your units of service.
  - Both hours and units of service need to be for the same time period:
    - Annual hours divided by annual units of services, e.g. ED visits, patient births, or OR hours or cases.
    - Pay period (two weeks) hours divided by pay period (two weeks) units of services, e.g. ED visits, patient births, or OR hours or cases.
    - Daily hours divided by daily units of services, e.g. ED visits, patient births, or OR hours or cases.
Key Terms- (cont’d)

- **Position Control**
  - The list of budgeted filled and unfilled positions by FTE based on your annual budget.
    - May be maintained by finance, human resources or nursing.
    - Who maintains your position control report at your organization?

- **Caregiver**
  - Caregivers may be identified as direct care givers, e.g. Register Nurses, LPNs, care technicians.
Structure of Evidence-Based Budget

- Your staffing budgets should be designed with qualitative and quantitative evidence:
  - Qualitative
    - Inclusive open dialogue
    - Transparency between nursing and finance
  - Quantitative
    - Built on internal and external benchmarks
    - Continuously focuses on productivity improvement
    - Budget formula driven with data

- Reporting tools must report budget to actual
Process of Evidence-Based Budget

- Nursing /finance collaborated on the development of the budgets
- “Real-time” decisions must be made with the budget in mind with patient care considerations
- Timely bi-weekly variance reports are provided measuring budget metrics against actual performance
- Variance reporting needs action plans developed, actions taken, and measured for improvement
- Is staffing and time & attendance technologies utilized to the fullest?
- Is further education needed to fully understand the unit budget to better meet these metrics?
The Personnel Budget

- Personnel Budgets
  - Productive FTE Requirements
    • Based on the staffing patterns reflective of the workload of the unit.
  - Nonproductive FTE Requirements
    • Based on the anticipated paid benefit time.
Producing an Effective Budget and the 4 Critical Areas

- **Volume**
  - What the annual volume of activity projected?
  - What is the average daily census (procedures, cases, visits) for the unit?

- **Patient Mix/Acuity**
  - What’s the type of patient mix to be cared for? How is it the same or different from the past year?

- **Staff Mix**
  - What’s the mix of personnel needed to provide the care?

- **Allocation**
  - What are the patient care needs over a 24 hour/7 day a week period?
Components of the Personnel Staffing Budget Process

- Review of prior year budget and past performance as compared to budget:
  - Review of personnel.
  - Review past Unit of Service (UOS).
  - Review current staffing plans.

- Determine if current staffing methodology is appropriate.

- Determine if quality standards/patient outcomes support the desired labor hours per unit of service.

- Determine if the number of staff is adequate.
Budget Perspective: Benchmarking

- What are the potential improvement projects to improve value?
  - How can nurse sensitive quality indicators improve while productivity improves?
    - Fall reduction
    - Pressure ulcer reduction
    - Ventilator associated pneumonia reduction
    - Central line infection reduction
    - Urinary track infection (UTI) reduction

- Are there “sacred cows” as “untouchables?”
  - Weekend “Baylor” plans?
  - Non-value added tasks?
  - Lack of team work?
  - Increased levels of worker fatigue?
Components of the Personnel Staffing Budget Process

• Tie budgeted hours and FTEs by cost center while determining actual vacancy rate.

• Establish budgetary salary dollar needs.

• Monitor budget on a concurrent basis.
Potential Salary Cost Drivers

Labor
- Skill mix
- Overtime
- Agency usage
- Length of service
- Staffing plans
- Differential wage and salary program
  - Shift differentials
  - Charge pay differentials
  - Nurse certification differentials
  - Special staffing programs with differentials
- Coverage for non-productive (benefit) time

Productivity
- Scope of service
- Departmental procedures
- Hours of operation/usage
- Staffing plans
- Staffing requirements
Staffing Goals

- Targeted skill mix
- Targeted # of Full Time Equivalents (FTEs)
  - Correct positions within those FTEs for coverage
- Targeted paid hours of care per unit of service
  - Hours of care Per Patient Visit (HPPV)
  - Hours of care Per Patient Day (HPPD)
  - Hours of care Per Patient Surgical Case (HPPSC)
  - Hours of care Per Patient Birth (HPPB)
FTEs vs. Positions

- Once the FTEs are determined, then the number of positions can be determined.

- Usually on nursing units, the number of positions is higher than the number of FTEs, due to mix of part-time and full-time employees needed for 24 hour and 7 day a week coverage.

- Factors to consider to determine positions:
  - Weekend coverage
    - What’s the weekend work pattern?
      - Every other weekend?
      - Every third weekend?
Sample Staffing Plan & FTEs: 12hr Shifts

- See Handout

- How many shifts of RNs are needed to work the 7am-7:30pm 12 hour shift?

- How many RN FTEs are needed for the 7am-7:30pm shift?
  - Assumption: All RNs work 12.5 hour shifts with a 30 minutes unpaid meal break. Paid work time is 12 hours a day.
Sample Staffing Plan & FTEs: 12 hr Shifts (cont’d)

- See Handout

- How many shifts of RNs are needed to work the 7am-7:30pm shift?
  - Add up all of the shifts needed each day for the seven (7) days of the week.
  - 42 shifts are needed.

- How many RN FTEs are needed for the 7am-7:30pm shift? (All RNs work 12 hour shifts.)
  - Assumption: All RNs work 12.5 hour shifts with a 30 minutes unpaid meal break. Paid work time is 12 hours a day.
Sample Staffing Plan & FTEs: 12 hr Shifts (cont’d)

- See Handout

- How many shifts of RNs are needed to work the 7am-7:30pm shift?
  - Add up all of the shifts needed each day for the seven (7) days of the week.
  - 42 shifts are needed

- How many RN FTEs are needed for the 7am-7:30pm shifts. (All RNS work 12 hour shifts.)

\[
\text{42 shifts} = 14 \times 0.9 \text{ FTE}^{**} = 12.6 \text{ FTEs}
\]

3 shifts

(**Note: 3 X 12 hr. shifts= 36 hours. 36 hours = .9 FTE)

40 hours

Assumption: All RNs work 12.5 hour shifts with a 30 minutes unpaid meal break. Paid work time is 12 hours a day.
Sample Position Control: 12 hr Shifts

- See Handout

- What are the total positions needed for the 12.6 FTEs of 12hr shift RNs on 7am-7:30pm shift?
  - Assumptions: All RNs work every third weekend.
  - There are no weekend only workers.

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Sample Position Control: 12 hr Shifts (cont’d)

See Handout

What are the total positions needed for the 12.6 FTEs of 12 hr. shift RNs on 7am-7:30pm shift?
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- A total of 18 positions would be needed in order to have 6 RNs on and 12 RNs off every weekend.
Sample Position Control: 12 hr Shifts (cont’d)

- A total of 18 positions would be needed in order to have 6 RNs on and 12 RNs off every weekend for 12.6 FTEs. For example:
  1) .9 FTE
  2) .9 FTE
  3) .9 FTE
  4) .9 FTE
  5) .9 FTE
  6) .9 FTE
  7) .9 FTE
  8) .9 FTE
  9) .9 FTE
  10) .9 FTE
  11) .6 FTE
  12) .6 FTE
  13) .6 FTE
  14) .6FTE
  15) .3 FTE
  16) .3 FTE
  17) .3 FTE
  18) .3 FTE
Non-Productive Time Coverage

Non- productive time for paid time off time might be another 14-16% for RNs.

- **8 hour shift RNs:**
  - Additional FTEs above the productive 8.4 FTEs would be needed, e.g. another 1.2 - 1.3 FTEs for a total of 9.6 - 9.7 FTEs for this day 8hr shift.

- **12 hour shift RNs:**
  - Additional FTEs above the productive 12.6 FTEs would be needed, e.g. another 1.8 - 2.0 FTEs for a total of 14.4 - 14.6 FTEs for this day 12 hr shift.
Non-Productive Time Coverage (cont’d)

- An example of calculating % of Non-Productive Time for 8 hour shift RNs:
  - 160 hours (4 weeks vacation)
  - 16 hours (2 educational days)
  - 32 hours (4 paid Holidays)
  - 24 hours (3 Floating Holidays)
  - 24 hours (3 sick days)
  - 256 hours

- 2,080 hours - 256 hours = 1,824 Productive worked hours

\[
\frac{\text{Non-productive hours}}{\text{Productive worked Hours}} = \frac{256}{1,824} = 14\%
\]
Hospitals vary with their budgeting for this non-productive time.

- Hospitals also have varying policies and procedures regarding if they hire into this non-productive time at all and/or how much is permitted to be hired into.

- If hiring into some non-productive time, some of the part-time positions may then be hired into as full time positions to have the needed coverage.

- The need to hire into non-productive may be dependent on your float pool and per diem staff available.
Relationship Between Planning, Budgeting & Control: Variance Analysis
Controlling Operating Results

- Will *your* organization reach the expected operating margin projected for the annual budget?

NO MARGIN : NO MISSION
Controlling the Operating Budget

- The operating budget is a static budget.
  - It does not change as the actual events of the year unfold.
- Variances are the differences between the amount budgeted and the amount incurred.
- Understanding variances
  - Why did the variance occur?
    - External Causes
      - Prices, volume, regulations, availability of personnel
    - Internal Causes
      - Availability of personnel, technology, efficiency, policies, standards, acuity
Variance analysis is key to success!!

- “Budgeting”
  ✓ The process to develop a plan.
- “Budget”
  ✓ The plan.
- “Variance”
  ✓ The difference between the amount budgeted and the amount incurred.
    - Favorable variance: Spent less than expected
    - Unfavorable variance: Spent more than expected
- Reporting Tools
  ✓ The proper timely reports are vital for managing resources.
Better Variance Understanding and Control

- What can nurse managers influence and control?
- How do systems work in the manager’s absence?
  - A manager is paid for 40hr/week and responsible for 24/7, which is 168 hrs./week.
  - Therefore, that manager is only onsite 24% of the time but has 24/7 responsibility.
  - What needs to “work right” when the manager is not here 76% of the time?
  - What are the challenges that others deal with when the manager is not present?
Challenges in Staffing Resource Management

• What are the challenges you face in staffing resources to meet budget?
  – Overstaffed?
    • How are staff cancelled in advance?
    • Prioritizing if staff need to be sent home
  – Clocking in early and clocking out late?
    • If a 12 shift RN works 40 hours of regular time each week, those extra 4 hours are 11% over budgeted hours of 36 hours.)
      – Why?
      – How can time be better managed?
      – What processes need to change to assure staff get out on time?

– Other challenges faced…
Maximizing Use of Technology

• Using reports from your time and attendance system
  – Daily?
  – Weekly?
  – Biweekly?

  – Tools for predictive modeling based on documentation to outcomes in the EHR
    • Acuity trending
    • Assigning staff to acuity needs
    • Predicting needs based on past acuity trends by DRG per patient and LOS

• And more…
More Questions for Discussion

Questions for discussion:
– Are positions correct for the FTEs needed and weekend coverage?
  • What needs changing?
– How is your actual overtime use compared to budget?
  • Why is it different?
  • How can it be reduced?
– What changes should you make in staffing to meet patient needs?
  • Do all 12 hour shifts work?
  • Would more part-time work hours help peaks in volume of activity?
Table Top Questions for Discussion

• How does your unit handle replacing RN staff when RNs call out sick on a day to day basis?
  – What recommendations for improvement do you have for this process?

• “Incidental overtime” (e.g. punching in early and punching out late) can be very costly to an organization. How does your unit handle this?
  – What recommendations for improvement do you have for better control and avoidance of these costs?

• How does your unit address your patient population and patient acuity when they prepare the staffing budget and matrix?
  – How do you address staffing needs when patient acuity either does up or down?
  – What recommendations for improvements do you have for this process?

• How does your unit handle staffing when there are significant census changes (increases or decreases) during your shift?
  – What recommendations for improvement do you have for this process?
Key References

Key References (cont’d)


Key References (cont’d)

Key References  (cont’d)


• Douglas, K. (2010). Ratios - if it were only that easy. *Nursing Economic*, 28 (2), 119-125.

Key References (cont’d)


